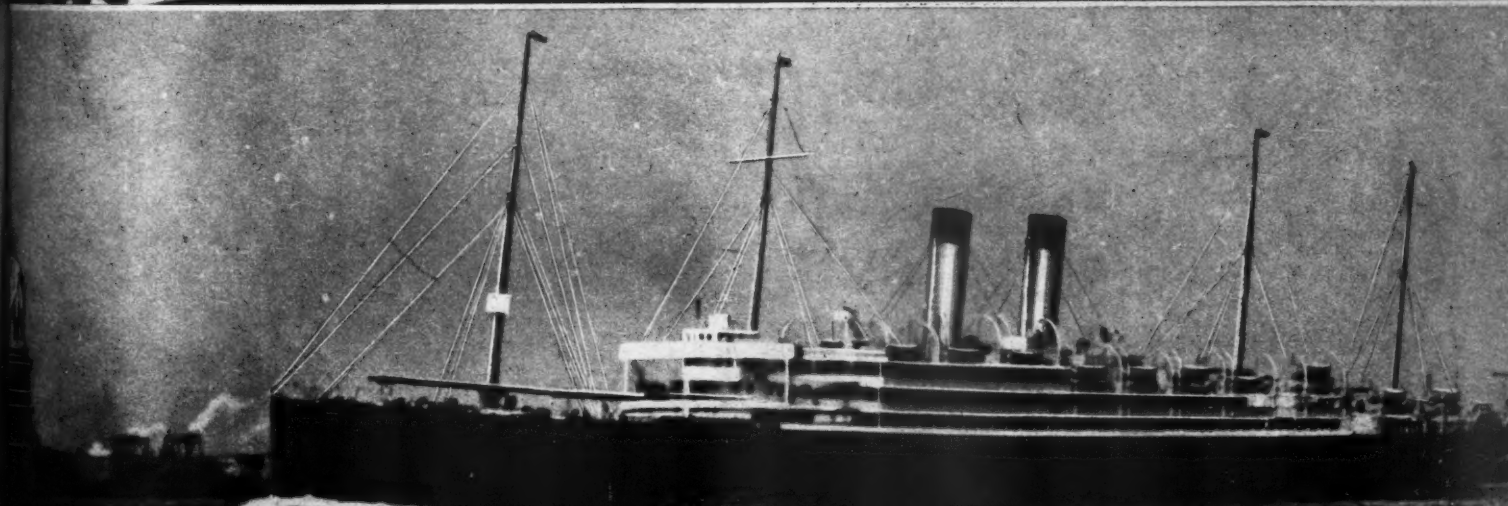


AMERICAN FRUIT GROWER



EUROPE'S MARKET SITUATION CHALLENGES U. S. FRUIT GROWERS—Page 11

Firestone

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**NOW—
EVERY FARMER
CAN PUT HIS FARM
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LOW COST!!!**

HERE'S the most important farm tire development of 1939! Firestone engineers have developed an exclusive new Economy Dual Changeover Plan, by which the lugs are removed from steel-lug tractor wheels and a set of dual Firestone Ground Grip Tires are slipped over your present wheels. No need to buy new wheels or cut down the spokes.

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MONEY
IN THE
FIELDS**



**SAVE
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For years the favorite tires of farmers everywhere. Now at new low prices they are the greatest tire values of the year. Equip your car with Firestone Standard Tires today.

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Without obligation on my part, please send me:

- ☐ A copy of the new Farm Guide Book.
- ☐ Information about the Firestone Farm Tire Payment Plan.
- ☐ Full details of the Firestone Tire Changeover Plan.
- ☐ Please demonstrate Firestone Ground Grip Tires with my own tractor on my own farm.

Make and model of tractor.....

Please demonstrate on..... (date)

Name.....

R. F. D. or St. No.....

Town.....

County.....State.....(Y7)

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SEPTEMBER

VOL. 59

1939

No. 9

AMERICAN FRUIT GROWER

The
NATIONAL FRUIT MAGAZINE

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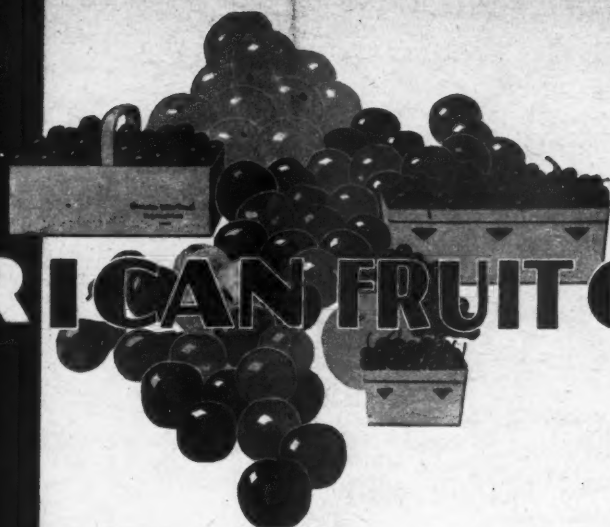
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MEET TRUMAN NOLD, FRIEND OF THE APPLE GROWER

IT gives us real pleasure to introduce Truman Nold to AMERICAN FRUIT GROWER readers. He merits this nationwide presentation to fruit growers for he is the newly appointed manager of the National Apple Institute. His job will be to put into actual practice the policies and program of the institute, to direct the distribution of apple promotion material and to co-ordinate this national program with the work of the various regional advertising and marketing groups. In effect, he is to be the friend and adviser of all fruit growers, individually and collectively.

Quite a job for a young man, but he knows both ends and the middle of the apple business. Ask him where he came from previous to his work as assistant to Carroll R. Miller in the management of Appalachian Apples, Inc., and Nold says: "From the business end of a spray gun." That was on his father's apple farm in northeast Kansas. This was followed by study at Drake University and the University of Kansas, where he compiled and published, in report form, the only existing record of nationwide apple advertising.

Already on the job, Truman Nold is busy preparing material for apple sales in co-operation with all retail outlet organizations, directing a research program out of which will come facts to bolster the story of King Apple's health-giving powers, and working hand in hand with sectional group managers.

Because he is working for the welfare of all apple growers, Nold's office door in the Pennway Building in Indianapolis is open to anyone who has a suggestion for the benefit of the apple industry. Nold also has an open mind which will enable him to receive suggestions with understanding and appreciation of the fact that success for King Apple can come only from co-operation within the industry.

On behalf of the industry AMERICAN FRUIT GROWER welcomes Truman Nold as a friend of the apple grower.

If you ever cleaned a horse's hoof

*you know why
THIS tractor tire
gives better "bite"*



You know how a horseshoe forms a pocket.

Well, pockets on the tread of a tractor tire can pack up the same way.

So the first rule in picking a tractor tire is — watch out for pockets, if you want a tire that won't fill up and slip.

That Goodyear Sure-Grip you see pictured here has a tread design principle you've seen before. You've seen it on steel wheels — where it's proved its success.

And as we point out in the picture, it has three things you need to look for in a tractor tire. Here's what they mean:



Open center—no mud traps. No corners where earth can pack.

Even spacing — no jerks. That means an even pull—no jerks to start slipping.

Buttressed base — no lug tear. These lugs are broader at the bottom — each one is self-reinforced. No need to join them together to hold them on.

This Goodyear Sure-Grip is a tire you don't have to baby.

That's why it pays to be sure of Goodyear Sure-Grips when you buy a new tractor or change over from steel to rubber.



THE GREATEST NAME IN RUBBER
GOODYEAR
SURE-GRIP—the Self-Cleaning Tractor Tire

HICKORY VARIETIES FOR NEW ENGLAND

AT the Boston meeting of the Northern Nut Growers' Association, C. A. Reed of the U.S.D.A. discussed varieties of hickories for the New England region. Mr. Reed pointed out that New England is richer in varieties of hickory, both recognized and potential, than in any other species of nut tree. Since about 1890, 80 or 90 hickory varieties from New England or similar latitudes farther west have been brought to light and have been considered worthy of propagation for test plantings. From this list Mr. Reed has selected 24 as worthy of further attention. Probably most of these are suitable for planting until extensive tests indicate more clearly their merits and faults.

Hickories are notoriously difficult to transplant and are propagated only in limited quantities by nut nurseries. It may be necessary for prospective growers of these varieties to purchase scions and propagate their own trees.

Among the varieties suggested by Mr. Reed are Anthony, a fine shagbark from northern Illinois, and Fox, another shagbark from Fonda, N.Y. From the Hudson Valley of New York, the Davis hickory was brought to light by nut contests in 1934. It is a rapid grower and grafts well on various hickory stocks. Fairbanks, a shagbark x bitternut hybrid from Iowa and one of the best known hickories, is also recommended for trial. The tree is handsome, easily propagated, grows rapidly and bears good crops. The fair-quality nuts are large and thin-shelled.

Glover has been highly regarded by nut experts, being of especially good cracking quality and one of the best hickories for New England. Neilson, from Ontario, is one of the best for New England planting. Taylor, from Connecticut, has long been regarded favorably, although there is some doubt as to the productiveness of the tree. From Iowa comes the Weschke variety which is doing well in Wisconsin.

A fuller account of these hickory varieties may be found in the report of the Boston meeting of the association.—GEORGE L. SLATE, Sec'y, Northern Nut Growers' Association, Geneva, N.Y.

Dr. H. B. Tukey and associates, New York Agricultural Experiment Station, have found that German granulated peat mixed with the fill, results in greatly stimulated root and top growth of newly planted trees. It is thought that the increased growth may be due to "better contact of roots with the soil moisture immediately after planting; improved aeration in early season favoring rapid root development; easier penetration of rainfall to area occupied by the roots; and easier penetration of roots into a peat-soil mixture."

World citrus production has increased at the average rate of about 10,000,000 boxes per year during the past decade and probably will continue to expand in the next five to 10 years, according to the U. S. Bureau of Agricultural Economics. In the United States the production of oranges has about trebled in the past 20 years, grapefruit production has increased nearly seven-fold, and lemon production has more than doubled.

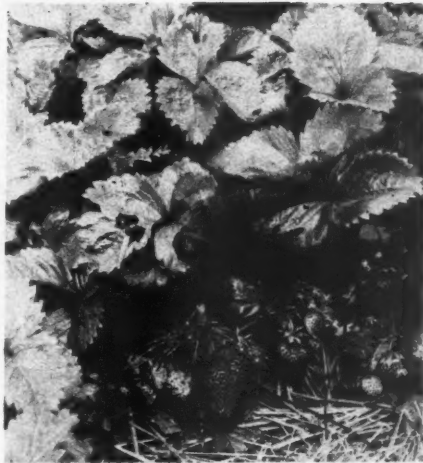
The soft drink industry is feeling the inroads of a comparative newcomer in this field, fresh fruit juice drinks, annual sales of which now total \$200,000,000 it is reported.



FOR the last 75 years, at least, horticultural writers have recommended the winter mulching of strawberries. Mulching as a practice is probably almost as old as the garden culture of this fruit, considered by many as the acme of horticultural crops. In the early days people grew strawberries in their gardens for their own enjoyment, and it is reasonable to suppose that they recognized and appreciated the superior cleanliness and quality of berries from mulched beds.

Why, then, discuss a practice which goes so far back that we do not know when it began or who started it? For two reasons at least. In the first place, old practices are not always right and frequently need to be reconsidered in the light of modern knowledge. In the second place, old practices which are correct are often discontinued for some insufficient reason and new evidence must be brought to light to revive them. In this particular case, there are probably few growers who would question the beneficial effects of mulching, but some may question, and not without reason, the economic value of the practice under their particular set of conditions. It is hoped that the following comments, based largely on observations made in New Jersey,

SEPTEMBER, 1939



may be of value to growers who are undecided about the desirability of mulching.

The first reason I am going to advance in favor of mulch is not usually considered the most important but it does need emphasizing—and that is that mulch will keep the berries clean and free from sand and grit, making them much more attractive to the consumer. In recent years, strawberries, like other crops, have frequently been produced in such large quantities that prices have been forced very low. Improvement of the quality of the product is one of the most satisfactory methods of solving the

(Continued on page 16)

AMERICAN FRUIT GROWER

MULCH STRAWBERRIES

for

- CLEANER,
BIGGER FRUIT
- CONSUMER
"EYE" APPEAL
- QUICKER SALES
- BETTER PRICES
- BIGGER PROFITS

By J. HAROLD CLARK

Above, top—Strawberries in tray at left from a mulched plot, those at right from an unmulched plot. Note relative size of berries.

Above, center—A well mulched field some time after the plants have been uncovered.

Left—Mulched berries, free of sand and grit, reach the consumer in attractive condition.

Below—Oats growing in a strawberry field which will be mulched with suitable material after a freeze severe enough to kill the oats.



NEW AND BETTER ON

By J. H. GOURLEY

WAS it a wag or a seer who said that the most unchanging thing is change? Charles F. Kettering expressed something of the same idea when he said that he was an enemy of a finished world. In other words, all who live in the modern civilization must be adaptable and change their thinking and their practices with invention and improvement or else be contented to sit on the side lines and watch the procession of progress march by.

Within the memory of a few folks now living, agriculture was still in

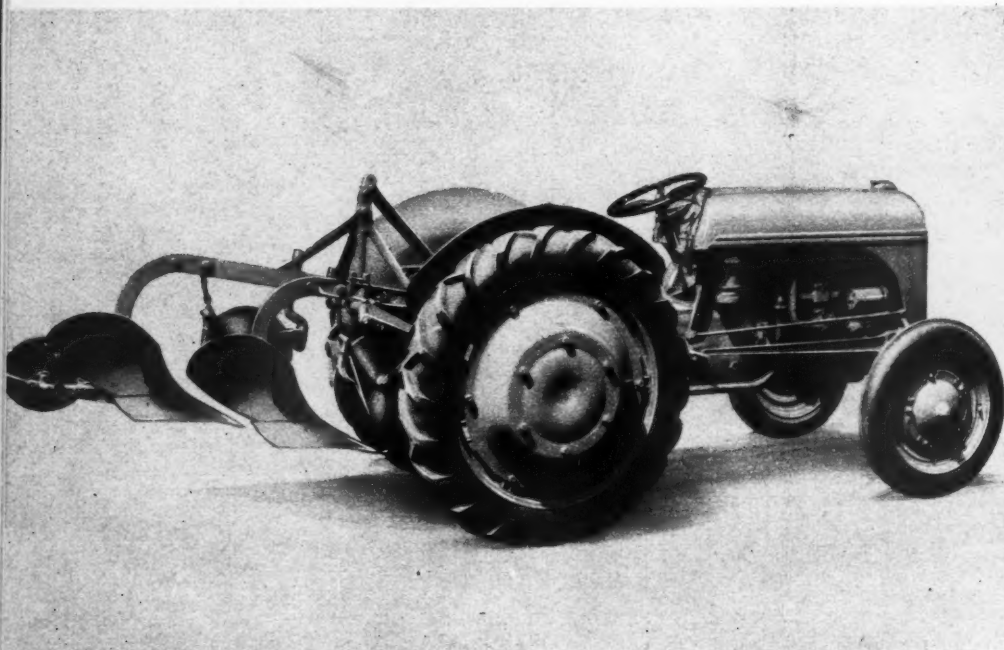
the dark ages. Grain was sown by hand, cut with a sickle, and threshed with a flail. This was just as it was done in Biblical times. Today, agriculture is changed to a degree undreamed of 50 or even 25 years ago. And as one looks at the new power equipment on display, he wonders what additional advantages the next generation is to have.

It is doubtless a truism to say that most of this progress is due to invention of machinery. Scientific progress has been largely dependent on the creation of instruments of precision. Agriculture and horticulture on the plow, the thresher, the gin, the trac-

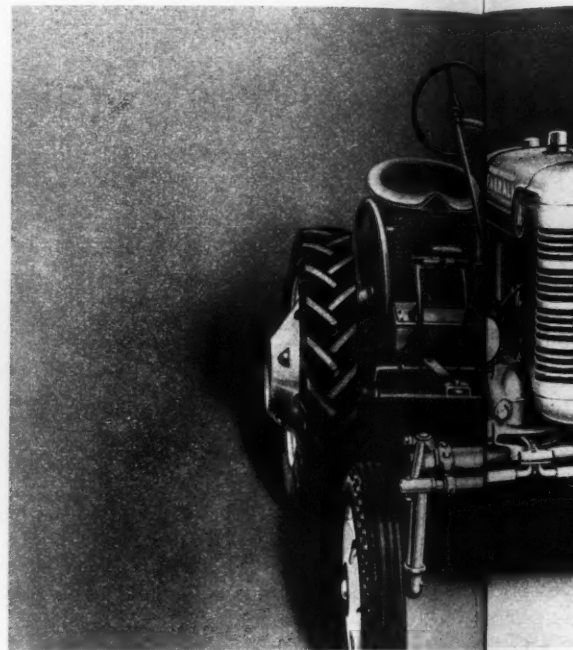
UNIVERSITY SURVEY INDICATES LOSE OUT AND TRACTORS

ON a group of central Illinois farms, agricultural economists from the University of Illinois have for the past 15 years been keeping records of operating costs and horsepower. Recently they published some pertinent facts from their year-after-year records. They point out, for instance, that from 1931 to 1937 there was a definite shift in the percentage of farms using various types of power. The figures show a shift of from 26 to 10 per cent for horses during the 1931-37 period, 58 to 20 per cent for standard-type tractors and 16 to 70 per cent for general-purpose tractors.

The number of work horses on these farms has declined 50 per cent during the past 15 years. And the number of tractors has increased 75 per cent.



New Ford tractor with Ferguson system of implement attachment is rigidly constructed of lightweight materials and has four-cylinder L-head engine fitted with self-starter.



Multi-vision arrangement features this new International tractor. Motor is offset to left of tractor's long axis so

WITH NEW, LIGHTWEIGHT,

WITH an entirely new principle of implement attachment to the tractor, the newly-announced Ford lightweight tractor with the Ferguson system of unit implements looms as a strong contender for high honors in cutting farm power costs since the need for excess weight to obtain implement penetration into the ground has been eliminated.

The hydraulic mechanism is not only a hydraulic lift, but a system for automatically controlling the implement to any desired depth, regardless of irregularities in the surface of the land. New unit implements are practically indestructible because the Ferguson system causes the front wheels to be pressed more firmly to the ground when implements strike an obstruction, relieving pressure on the rear wheels and allowing them to spin freely. Besides the line of plows, other implements are a row-crop cultivator and a general cultivator which can be put to a variety of uses on any farm. Tines of the general cultivator are so constructed that when an obstruction is encountered they automatically ride over it and go back in the ground without stopping the tractor or raising the implement.

Engine of the new Ford tractor is of the L-head type with four cylinders. The tractor will be fully equipped with rubber tires, battery and generator, self-starter, governor, air cleaner, muffler, power take-off, hydraulic controls for all implements, fenders, instrument board, ignition lock and independent brakes on rear wheels. Tread is adjustable from 48 to 76 inches front and rear.

AT a recent meeting in Chicago, held to introduce the new Farmall-A tractor, Sydney G. McAllister, president of the International Harvester Company, while discussing the tractor, remarked, "We have had it at work in the fruit belt along Lake Erie, in the Imperial Valley of California, in the blacklands of Texas, in the hilly, mountainous regions of Pennsylvania. . . . We put tractors in the hands of regular dirt farmers." Thus Mr. McAllister has brought out some of the background of the latest Harvester Company tractor before its recent introduction to the market.

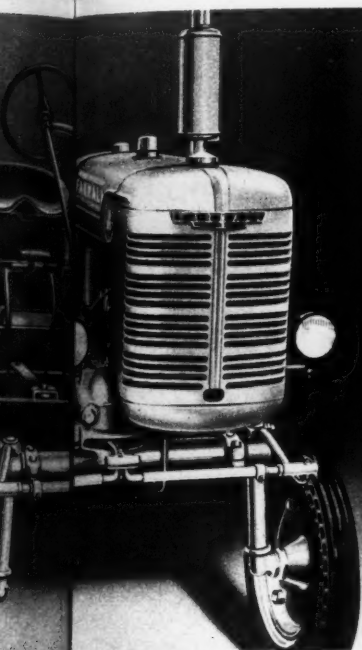
Outstanding feature of the Farmall-A is its Culti-Vision construction. The tractor is offset to the left of the tractor's long axis and the operator's seat is placed

R ORCHARD PRACTICE

KEY INDICATES THAT HORSES TRACTORS GAIN STEADILY

gricultural number of hours worked per horse took a 40 per cent slump. Reflected in this drop in horse numbers and hours worked is the doubling of the number of hours of use per tractor, while at the same time, and probably most striking of the findings, there was the cost per hour of tractor operation has been cut almost in half.

ow a shift It may be some time before Old Bess and the apple mare are entirely discarded from general standard-type farms, but fruit farms, as shown by a government survey, are close to being completely mechanized with 75 per cent tractor ownership as compared with a tractor ownership of 23 per cent for all farms.



is this International Harvester Company Farmall-A tractor long axis so operator sees work being done.

IGHT, UNIT TYPE TRACTORS

go, held that the operator looks directly at the work being done, eliminating guesswork and fatigue caused by leaning sideways in a strained position. The four-cylinder Farmall-A engine pulls a 16-inch plow bottom or a one-row middlebuster. The engine has replaceable cylinder sleeves, Tocco-hardened crankshaft, overhead valves, precision bearings and a variable-speed governor. It will operate at full load on one gallon of gasoline or distillate per hour.

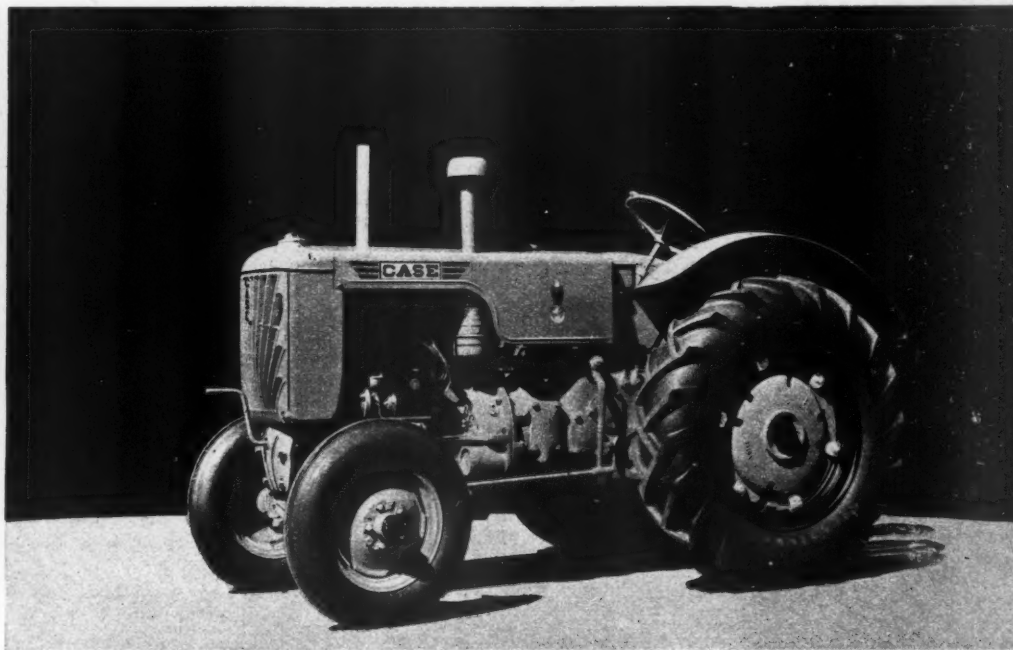
Tread of the Farmall-A rear wheels is adjustable at four-inch intervals from 40 to 68 inches. Regular front wheel tread is 43 inches. An adjustable front axle is available which permits front and rear wheels to run in the same paths. Steering brakes may be operated separately for short turning.

tor, the mechanical sizer, the washer. It is now a new problem to learn to use the tools properly and economically, to adapt them to one's own enterprise.

For instance, the orchardist is often accused, and with much justification, of merciless cultivation so that the soil is washed or blown away, organic matter disappears and the soil is left "lifeless" and barren. Where cultivation is desirable in the orchard, all authorities agree that green or cover crops should be grown and returned to the soil. But meager, half starved crops fall short of the mark, they do little to prevent the disastrous effects

of excessive tillage. It is only by growing heavy crops to turn back to the soil that the balance can be maintained. One station is showing that the best block of peach trees in a series of experiments is the one where a large quantity of cover fodder has been disked into the land. But it requires a powerful tractor and large disk to properly incorporate it with the soil. On a large scale operation this practice could be justified. The same station has shown that large crops of silage corn worked into the soil has resulted in notable increases in potatoes, due in part, to the improved

(Continued on page 8)



Economy of operation of this new Case Model R tractor, especially with light loads, is insured by a new fourth gear. Definite styling with serviceable materials gives it added prominence.

CHARACTERIZED by a distinctive color finish known as "Flambeau Red," the new Case Model R is an all-round, light, four-wheel tractor for general work. A serviceable cast iron grille protects radiator from damage, and a new fourth gear gives more economical operation with light loads.

The Model R pulls a two-bottom plow under average conditions or any other loads requiring similar power. Power is delivered at drawbar, belt and power take-off shaft. The long, swinging drawbar with which this tractor is equipped locks automatically when backing. Removable cylinder sleeves feature the four-cylinder L-head tractor engine and pressure lubrication is provided to all main, connecting rod and camshaft bearings. The crankshaft has three bearings and an oil-bath air cleaner washes air before it enters carburetor. A sensitive, fly-ball type governor is controlled from the operator's seat. The tubular radiator has cast headers and a four and one-half-gallon water capacity.

"Easy off-Easy on" implements are provided in motor lift or lever lift to fit the Model R tractor. All of the standard implements are included in this series and they have a wide range of adjustments for various crops and row widths. Turning radius for this tractor is 10 feet.

Standard equipment on the Model R includes fenders, platform, swinging drawbar, belt pulley and pulley brake. Power take-off is classed as extra equipment for this model, but is available for special implements or equipment.

NEW AND BETTER ORCHARD PRACTICE

(Continued from page 7)

aeration and texture of the soil.

Looming on the new horizon is an array of surprisingly efficient equipment, made efficient because fruit growers have a definite work to do and it must be done in a way that will result in not only a better output, but also lower operating costs.

Contour planting is definitely coming into the fruit growing picture. Growers are convinced that terracing of established orchards and contour planting of new blocks is the answer to their needs for maintenance of moisture supply.

Much can be said pro and con on the matter of permanent cover or the sod-mulch system versus cultivation for orchards. There are some growers who would use nothing but a combination. This practice is being followed by an Indiana orchardist who has his fruit acreage in bluegrass sod, but who also cultivates an area around each tree. Another grower in this same section planted alfalfa in a three-year-old orchard 14 years ago and the same stand is producing mulching material today. His only cost has been for mowing. Orchard tractors and implements, made especially for close-to-tree work and short end-of-row turning, have made these experiences possible. New mulching materials are being tried and used in many sections. Among these are sawdust, alfalfa chaff and sugar cane.

Probably no phase of fruit growing has changed so greatly as the processes of pest control. To the entomologists and plant pathologists, fruit growers are indebted for constant study to make the pests of orchard, vineyard and small-fruit planting less damaging when control recommendations are followed. Trustworthy chemicals, new types of sprayers, dusters and power equipment and the co-operation of sources of information have all helped to control the pests that seem to be the ever-recurring problem of fruit-growers.

Photographs on left, reading top to bottom:

The ingenious fruit grower steering this new John Deere Model "H" unit prefers to stand while operating the tractor so he removed the seat and built a platform on the drawbar. This is the smaller Deere general-purpose model.

Operator of this Caterpillar R2 looks back to watch action of four-bottom plow. This Caterpillar type provides power for 10-foot double disk, seven-foot cover crop disk and power takeoff for spraying and dusting.

A Model "B" Allis-Chalmers tractor and tandem disk serve to keep this berry planting free of weeds. Belt pulley and power take-off are contained in one unit on this model. Rear wheel tread is adjustable from 40 to 52 inches.

With a tread of 42 inches, the new Cleveland Tractor Co. Model "H" Cletrac is especially suited to orchard work. This crawler model is fitted with exclusive turning features and a four-cylinder, high-compression engine.

SEPTEMBER, 1939



HOW TO MEET APPLE AND PEAR MARKETING PROBLEMS THIS SEASON

By PORTER R. TAYLOR



Porter R. Taylor presenting his marketing talk at Cincinnati IAA convention.

LAST year I was asked to analyze the unsatisfactory experience of the 1937 apple crop and to point out certain basic lessons from the marketing of that crop which might be applied in the future. These conclusions are

briefly summarized in the following paragraphs.

In the seasons of 1933, 1934 and 1936, when total production was relatively small, an average of approximately 70,000,000 bushels of apples was sold in fresh form in domestic markets. In the seasons of 1931, 1935 and 1937, when production was relatively large, domestic fresh sales were forced to an average of about 97,000,000 bushels. Such heavy offerings resulted in a reduction of from 30 to 35 cents per bushel in the average season price at New York.

If approximately 70,000,000 bushels is the volume of apples for which consumers are willing to pay growers a reasonable price, should not the industry take steps to reduce the volume marketed as fresh fruit to approximately that amount?

There appear to be at least three possible methods involving legislation by which the quantity of apples marketed may be limited. State legislation has been attempted for years, but the actual results have not been encouraging. A second approach might be through expansion of the Export Apple and Pear Act to apply to interstate as well as foreign shipments so as to require that all interstate shipments be equal to or better than the Utility grade. A third approach might be through marketing agreement programs developed on a regional basis. If any of these plans are developed, they should be co-ordinated with the development of new products to ab-

So important for study by every grower is the problem of fruit movement from harvest (depicted in photo at right) to retail outlet (shown at right, below) that we have digested in this article the fact-filled talk given by Porter R. Taylor, chief, General Crops Section, Agricultural Adjustment Administration, before the 44th annual International Apple Association convention. This material represents a sincere review of the fruit marketing situation as a background for suggesting apple and pear marketing procedures. By warning and appeal, based on past experiences, Taylor carries the quality standard to the nation's growers.—EDITORS.

sorb the better quality of fruit which is not placed on the fresh market.

Apple growers and shippers must realize that the supply of competitive fruits has increased materially in recent years. Between 1921-25 and 1933-37 the average per capita consumption, in domestic markets, of fresh oranges and fresh grapefruit combined increased 50 per cent while consumption of apples declined 14 per cent.

The steady increase of apples held in cold storage has enlarged the volume of the crop which must be marketed after December 1. Development of the advertising and promotion work now under way would be greatly assisted through some effective program for removing culls.

The most important problem before the industry is to make apples and pears profitable to the grower who has a productive orchard of good market varieties with reasonable costs of production and at least average market opportunity. This probably can be done best by offering the maximum volume of good quality fruit which consumers are willing to purchase at a remunerative price to the grower, and no more.

Last year I tried to point out that the fundamental methods of distributing apples had changed during the past 25 years. At the beginning of that period growers were accustomed to sell all or a portion of their crops during the months of August or September to terminal market dealers who then took over the responsibility for the merchandising of the crop. This is

(Continued on page 15)

AMERICAN FRUIT GROWER





Left—Truman Nold discusses apple marketing with Robert Bly, president, International Apple Association (center), and Carroll R. Miller, secretary, Appalachian Apples, Inc. (right). Right—Tom O'Neill, general manager, New York-New England Apple Institute, points out booklets to R. J. Martin, secretary-manager, Michigan State Apple Commission (center), and F. W. Beneway, vice-president, New York-New England institute.



A veteran of apple advertising work, E. Stuart Hubbard, Poughkeepsie, N. Y. (right), chats with A. G. Waller, New Brunswick, N. J. Hubbard is treasurer of the New York-New England institute.



Grower and marketer get together. William Schieferstein, manager of the Pennsylvania Ontelaunee Orchards (left), and C. B. Denman, agricultural counsel for chain store group.

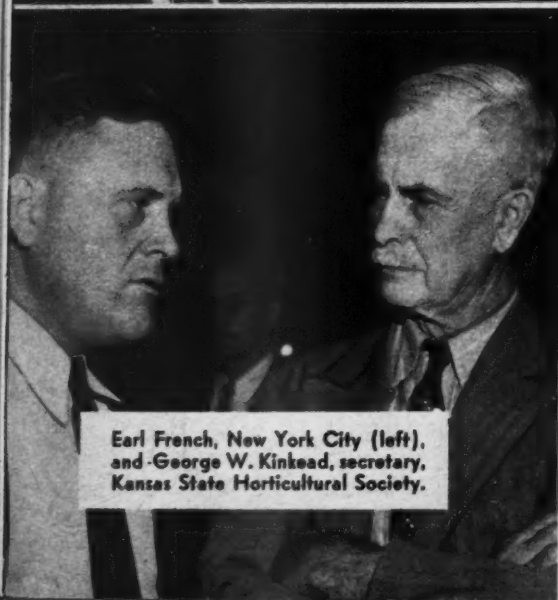
CAMERA AT CINCINNATI

MUCH definite progress was chalked up at the mid-summer meeting of the National Apple Institute held at Cincinnati. Probably of greatest importance to the advanced development of this nationwide co-ordinating group was the selection of Truman Nold, former assistant to Carroll R. Miller in operation of Appalachian Apples, Inc., as manager. Nold has taken over his new duties and is located at Indianapolis.

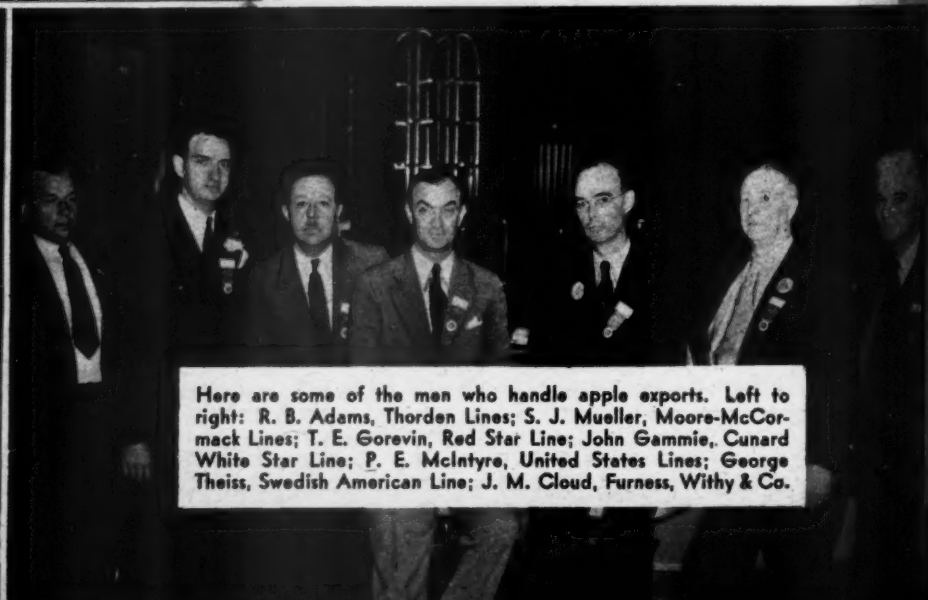
Members of the institute requested co-operation of retail chain outlet associations and companies in staging a series of apple promotion drives through their stores. First of these was requested as regional apple pushes during September. NAI hopes to start other 10-day-long drives beginning October 26, December 7 and February 1. Member stores of the Independent Food Distributors Council have pledged their co-operation to begin with a National Apple Harvest Sale from September 24-30 and including special sales coinciding with the dates mentioned above.

Following discussions, the institute decided to sponsor original research on the health value of apples to be carried on by the University of Chicago. NAI also moved to request the Surplus Commodities Corporation to place apples on surplus list where surplus of fruit appears and where the stamp plan of commodity distribution is in operation.

International Apple Association's three-day convention followed the National Apple Institute meeting. During the convention sessions, leaders in apple marketing from all parts of the nation discussed a variety of questions pertinent to the movement of this year's crop.



Earl French, New York City (left), and George W. Kinkead, secretary, Kansas State Horticultural Society.



Here are some of the men who handle apple exports. Left to right: R. B. Adams, Thorden Lines; S. J. Mueller, Moore-McCormack Lines; T. E. Gorevin, Red Star Line; John Gammie, Cunard White Star Line; P. E. McIntyre, United States Lines; George Theiss, Swedish American Line; J. M. Cloud, Furness, Withy & Co.

EUROPE'S MARKET SITUATION CHALLENGES U. S. FRUIT GROWERS

By FRED A. MOTZ



Fred A. Motz, whose talk at IAA convention makes up this article, is U. S. Agricultural Commissioner stationed in London.

CHANGES in Europe during recent years have not been confined to international boundary lines. There is perhaps no period in the history of commercial fruit growing that has witnessed as many drastic changes as those which have occurred during the past decade.

Conditions which obtained a few years ago are today obsolete. Certain producing areas which only a short time ago played a prominent part in world markets, have become relatively unimportant, while other sections which were formerly regarded as unimportant or were even unknown have developed into extremely significant factors.

Apple men have been told many times in the past that the export outlet was the safety valve of our industry. No truer statement was ever made, yet how difficult it has been to make certain growers and shippers appreciate the full significance of this statement.

Because of its geographic location, the British market has become the principal outlet for fruit growers throughout the world. Each year millions of packages are imported, originating from every quarter of the globe. No market on earth offers a greater variety or abundance of supply. Apples are not only available every day in the year, but oranges, grapefruit and other fruit as well.

Ten years ago Palestine, for example, exported only about 2,000,000 packages of oranges and grapefruit. This past season just over 15,000,000

boxes were exported. In 1930, California exported to the United Kingdom a thousand packages of fresh grapes. This past season their exports amounted to just under 1,200,000 packages.

South Africa, Argentina, Brazil, Italy, Bulgaria and many other countries are competing heavily on the British and other European markets. Florida this past season sent large supplies of oranges abroad, while Texas grapefruit entered the overseas market for the first time.

While production is increasing in all continents, there has been a corresponding improvement in the physical handling of the crop, the development of higher standards, and greater efficiency, regularity and speed in transportation.

Precooling and improved methods of refrigeration have been significant contributing factors leading up to our

present problem of increasing competition.

The problems of marketing of a highly perishable product on any market differ greatly from those centering around a non- or semi-perishable product. Perishables must move irrespective of price. They cannot be held indefinitely in anticipation of a

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AMERICAN FRUIT GROWER

At the Cincinnati IAA convention, Samuel Fraser, assistant secretary of association (left), seems busy talking with J. J. Castellini, Cincinnati.

This happy group consists of (left to right) John R. Baldwin, St. Louis; William Wert, Cincinnati, and W. C. Ruggles of Rochester IAA headquarters.


A talkative banquet trio includes (left to right) Dr. Henri Stolbach, Geneva, Switzerland, fruit importer and economist; his interpreter, Pauline Yudell, New York City, and W. A. Hein, St. Paul.

Warren French, IAA vice-president (center), meets visitors from Northwest, M. A. Peacock, Yakima (left), and C. W. Kohagen, Hood River.

Enjoying coffee before banquet program are (left to right) R. G. McKee and W. J. Douglas, Kansas City, with B. H. Densmore, Albion, N. Y.



Dynamic R. G. Phillips, veteran secretary of International Apple Association, was snapped by AMERICAN FRUIT GROWER cameraman while commenting on his report at association's recent convention.



Cranberry picking is done with wooden scoops having rake-like front edges which pull the berries from vines. Most pickers are migratory workers who arrive at the bogs in early September. Careful separation of good fruit from bad is done by trained sorters. Much of the success from cranberry promotion is based on marketing of only quality fresh stock and top grades of canned cranberries and popular by-products.

BERRIES

CRANBERRY DRIVE

For several years prior to 1916 the United States cranberry industry realized steadily low prices for its product. With the founding in 1911 of the now-strong American Cranberry Exchange, there started some semblance of organized marketing, climaxed in 1916 when a national advertising campaign was launched. While in 1916 cranberries sold for \$5.76 a barrel, the constant advertising hiked the price per barrel to \$8.49 as an average for the 1916 to 1936 period. And this higher average price for the 20-year span represents returns after deduction for all advertising costs.

Thus it can be seen that past experience is a basis for the continued promotional work of the American Cranberry Exchange which is already preparing this year's seasonal advertising drive.

Starting about 1846 when a clever New England horticulturist cleared a seemingly worthless cedar swamp and planted wild cranberry cuttings, the industry has spread to include the im-

portant producing states of Massachusetts, New Jersey, Long Island and Wisconsin, while Oregon and Washington produce a small portion of the yearly crop. Annual cranberry production is variable. In 1937 the crop amounted to 877,300 barrels and last year this amount was halved with a production of 457,300 barrels.

Most important need of the cranberry plants, which produce the average 60,000,000 pounds of this fruit consumed in this country each year from October to end of March, is plenty of water. Peat soil, with a layer of sand on top to mulch the dampness of the peat and anchor down runners of the cranberry vines, makes an ideal bog if properly irrigated. To supply water in summer and flood the bogs when frost threatens before crop harvesting, ditches, dikes and sluice gates have to be built. Since only a relatively few sections are suited to cranberry culture, the demand usually exceeds the supply. To maintain this demand, though, and to increase consumption of both fresh and canned cranberries, the exchange is continuing its advertising drives to promote the famed "Eatmor" brand.

FAVORED PURPLES

Apparent freedom from mosaic diseases and high quality are sufficient assets to place any bramble in favor with small-fruit growers. These characteristics fit Sodus and Marion, two new purple raspberries originated at the New York Experiment Station. G. L. Slate, the station's small-fruit specialist, says that "Sodus berries are large, firm and attractive, being much superior to Columbian. A canning test indicates that this variety will be good for canning." Sodus resulted from a cross between Dundee, a black raspberry, and Newburgh, one of the better reds.

Chief purpose of introducing Sodus is to provide a variety to replace Columbian, the standard purple raspberry, since plant pathologists believe that all Columbian plants are infected with one of the raspberry mosaic diseases. Marion is valued especially for its late season, ripening about a week after Sodus. It is the result of a cross of the black Bristol with one of the station seedlings which is a sister of Newburgh.

STATE NEWS

TEXAS—A trade and consumer market study conducted by the Texas pecan industry over a three-month period indicates such a bright future for Texas pecans that a three-year national advertising program has been approved by the industry.

The 1939-40 campaign in national magazines and newspapers and outdoor advertising will start in November and continue through April. It is to be financed by an assessment of one cent per pound on the 1939 crop, estimated at 25,000,000 pounds, making available approximately \$200,000.

The United States has a world monopoly on pecans and Texas holds about 40 per cent of the monopoly, it is reported.

Preliminary to expansion of the market for pecans, several food laboratories are conducting research toward new uses for pecans.

KANSAS—The Wathena Apple Growers Association is adding a cold storage house as another unit to its fruit packing plant. The success of this association speaks well for Taylor Bauer, who has been manager since its organization.—**GEORGE W. KINKEAD**, Sec'y, Topeka.



FLORIDA—Citrus nutritional deficiencies are explained and symptoms clearly illustrated with color photographs in a new bulletin issued by and obtainable from the Florida Agricultural Experiment Station, Gainesville.

Symptoms on leaves, twigs and fruit of copper, zinc, manganese, magnesium, nitrogen, iron and boron deficiencies and boron toxicity are described, and methods of control suggested. Symptoms are discussed both when occurring alone and in combinations.

Eight color plates are used and 11 black and white illustrations, in addition to 56 pages of descriptive matter. The bulletin, No. 335, is entitled, "Some Symptoms of Citrus Malnutrition in Florida," and the authors are Drs. A. F. Camp and B. R. Fudge of the Lake Alfred Citrus Experiment Station.

ILLINOIS—Dr. J. W. Lloyd has been appointed acting head of the Department of Horticulture in the College of Agriculture, University of Illinois, to succeed the retiring head, Dean and Director J. C. Blair.

Dr. Lloyd, who has been a member of the staff for the past 40 years, becomes the second head of the department which Dean Blair created 39 years ago and which he has headed ever since.

All research work with vegetables at the experiment station since 1902 and all research work in fruit and vegetable marketing since 1925, together with work along fruit spraying lines, has been conducted under the supervision of Dr. Lloyd.—**J. H. HALE**, Sec'y, Kell.

MICHIGAN—An official trade-mark, which will gradually begin to appear on all packages and in all literature and advertising of Michigan apples, has been adopted by the Michigan State Apple Commission.

The trade-mark consists of an outline map of Michigan in green and black with a broad band of white across the center separating two bands of green at top and bottom, respectively.

The two green bands contain the lettering, "State of Michigan Apples." The white band provides space for information on grade, variety designation, individual grower's or packer's trade-mark, etc.

Gummed labels of the trade-mark only, two and one-half inches by three inches in size, are being furnished growers at no cost.



WASHINGTON—A newcomer in the insect world in Washington has been identified as pear psylla, a destructive insect which attacks both pears and quinces. Activity of the pest is confined at present to a small area in the State and it is hoped control measures being worked out will prevent its spread. In New York State, pear psylla is a major pest of pears.

NEW JERSEY—At the helm of the New Jersey State Board of Agriculture is one of the State's largest fruit growers, Lester Collins of Moorestown. Collins is serving his third term as president of the department, having recently been re-elected to that office.

Collins is a former president of the New Jersey State Horticultural Society and one of the pioneers in exporting apples and pears to Europe. He operates large cranberry and blueberry holdings as well as orchards in Burlington County.

MARYLAND—Signs posted in packing houses throughout Maryland constantly remind employees that careful handling and packing will prevent bruising of fruit. A set of three signs has been furnished free to each grower by the University of Maryland Extension Service. Where additional sets are needed, or where a grower has failed to receive his set, the Extension Service at College Park, Md., promptly sends them upon request.—**A. F. VIERHELLER**, Sec'y, College Park.



OHIO—Supplementing the merchandising efforts of the Ohio Apple Institute, various grower-members are using novel means of creating grocer and consumer interest in apples. One grower is staging a party at his farm for his grocer customers so they may see how apples are grown, graded, packed, etc., and thus become better apple merchants. Another is arranging to have a big apple display at a prominent city corner. And one county thus far is reported to be preparing for a general apple festival.

MINNESOTA—Apple growers who had trouble with scab last season set out this year to do a thorough job of spraying. Result: Exceptionally clean apples.

Sturdy red raspberries are seemingly produced in Minnesota, judging from the fact that a truckload of these ordinarily highly

perishable berries shipped from Duluth to the New York City market arrived at destination in very satisfactory condition after 48 hours on the road!

Excelsior, in Hennepin County, will celebrate its annual Apple Day on September 10. Plans for the day include a competitive apple show and other fine features.

Members of the Minnesota State Horticultural Society will gather at the University of Minnesota Fruit Breeding Farm on September 23 to view the new fruits under production there.—**J. D. WINTER**, Sec'y, Mound.

WEST VIRGINIA—This year's apple crop of Consolidated Orchard Company will be pre-cooled in the new precooling room of the packing and cold storage plant the company is constructing at Paw Paw. The plant, one of the largest in the area, will have a packing plant capacity of five cars a day and a 50,000-bushel cold storage room. The 50,000 bushel precooling room will be used this year in connection with the company's old packing house. The new packing unit and storage section will be ready for the 1940 crop.



MASSACHUSETTS—Can you tell the difference between an apple blossom and an apple leaf? (Yes, this is a serious question.) There really are hundreds of people in Massachusetts, including a number of fruit growers, who looked at apple leaves last spring and decided they were apple blossoms!

John E. Rice, owner of the famous 325-acre Rice Orchards at Marlboro, related during the summer meeting of the Massachusetts Fruit Growers Association at his orchards how the people were illusioned.

This past blossom time, said Mr. Rice, a stretch of orchard along the road was lighted at night by a new type electric lamp. Thousands of people came to enjoy the sight. They kept coming, days after the petals had fallen.

Mr. Rice couldn't understand why the crowds continued to visit his place, so one night he went down to the lighted section of the orchards. He was amazed, for even to his trained eye, there were blossoms!

Upon investigation he found that the leaves, which were approximately the same size as blossom petals, covered with the white spray material and reflecting the light from the lamps, gave a perfect illusion of apple blossoms!

INDIANA—Dr. J. H. Skinner, dean of the School of Agriculture and director of the Agricultural Experiment Station and of Agricultural Extension at Purdue University, has retired from active duty. Dr. Skinner was dean of the School of Agriculture since 1902 and director of the research and extension work since 1928.

The new head man in the agricultural work of Purdue, succeeding Dean Skinner, is Harry J. Reed, assistant director of the agricultural experiment station since 1917. Reed was one of the first county agricultural agents of the State.—**R. L. WINKLEPLECK**, Sec'y, Lafayette.

APS

A PAGE CONDUCTED IN THE
INTERESTS OF THE AMERICAN
POMOLOGICAL SOCIETY

SELECTING FRUITS FOR EXHIBITS

ORCHARD tours are becoming more popular every year. These tours are usually organized by state horticultural societies or by the extension service or experiment station. Very often these agencies co-operate. The popularity of the "orchard tour" idea is due in no small measure to the desire of orchardists to visit good orchards and to have an opportunity to discuss with experts the many problems incidental to orcharding. No better opportunity can be afforded than is offered by the growing trees and their crop. Trees have a story to tell if horticulturists will but interpret what can be observed in the open orchard. To have the assistance of experts who have made special studies is invaluable. Concrete examples are far more effective in teaching than are abstract discussions later on at the winter meetings.

September is the time when all good apple growers make ready for the harvest. Apple harvest is indeed the busiest season of the year. At harvest time, many growers find it difficult, if not almost impossible, to select fruit for winter exhibitions. However, if one expects to show fruit, there is no better time to select prime show fruit than in the orchard before it is picked and handled one or more times. Trees which carry well-developed fruits should be marked and the fruit permitted to hang until the full color and size have developed. Show fruit can then be carefully selected, handled and

stored for exhibit purposes.

This, then, brings us to the point that the next annual meeting of the American Pomological Society will be held at Worcester, Mass., January 3-5, 1940, with the Massachusetts Fruit Growers' Association the host society. A new variety exhibit provides one of the most interesting phases of these American Pomological Society conventions. Throughout the East, many growers are testing new varieties. There is no better place to show new varieties than at such meetings. Every grower, therefore, who has new varieties should make an effort to select specimens for exhibit at the Worcester meeting. Such exhibits permit growers to see, study and compare new varieties one with the other and with old varieties. Such comparisons and the experiences of practical fruit growers is one method of selecting the most promising varieties, of eliminating the less meritorious sorts. Progress in fruit growing is closely allied to improvement in varieties. Further announcements will be made relative to the fruit show at Worcester, but now is the time to prepare for the showing of both new and old varieties.

Summer meetings of state horticultural societies attract large crowds of interested fruitmen, as evidenced by the rows of automobiles lined up to the rear of the cold storage on the T. E. Thornburg & Son fruit farm during summer meeting of the Ohio society held at the orchard.



STRAWBERRY MULCHES

(Continued from page 5)

problem from the standpoint of the consumer as well as the grower. I am convinced that better average quality of the strawberry crop will mean greater consumption. One dose of muddy or sandy berries is usually enough to cure the average person's desire for berries for some time. The importance of mulch in keeping the berries clean is hard to measure and varies greatly with the environmental conditions, which, perhaps, is why it is not so often stressed.

The efficiency of mulches in preventing winter injury is most often emphasized and from some angles is the most important reason for using them. This is particularly important in those sections where zero temperatures may be expected and especially where the soil is rather heavy so that unprotected plants readily heave out of the ground as a result of alternate freezing and thawing. An adequate mulch will protect against heaving, against direct injury to crowns and roots from low temperatures, and by delaying blossoming somewhat may decrease losses from spring frosts.

Mulching is one of the best ways of preventing soil erosion during the winter months. The current emphasis on erosion control should result in increased use of mulch for strawberries as well as for other crops.

A mulch will conserve moisture by preventing the direct rays of the sun as well as the drying winds from reaching the surface of the soil. The effect of mulch in preventing growth of weeds and grass is also most important in checking water losses from the soil.

A great many strawberry soils are rather low in organic matter and a good mulch which adds from two to three tons of dry organic material per acre may be of considerable benefit to the crops which follow. By the end of the harvest season the mulching material may be ground to pieces under the feet of the pickers but very little will be actually lost. It would be very difficult to grow a cover crop which would add as much organic matter, so we may consider the residue as an extra dividend received from the mulch after it has had its desired effect on the strawberries.

Ordinarily, a mulch will increase yields by affecting the plants in one of the ways mentioned above. Where injury by cold is not a factor and where there is an ample supply of moisture at all times there may be no increased production. In wet years, however, the effect of the mulch in keeping the berries clean is most important, and there is still the residual effect of the organic matter which is left on the land.

The one obvious disadvantage of

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APPLE AND PEAR SALES

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no longer the case. Now growers, as a class, harvest their fruit and carry it well into the marketing season.

The apple marketing problem for the coming season perhaps can be best summarized as follows: The commercial crop which is usually sold as fresh fruit will amount to approximately 100,000,000 bushels. Of this volume, from 7,000,000 to 12,000,000 bushels have been exported in recent years, and it would appear reasonable to expect exports of around 10,000,000 bushels. This would then leave about 90,000,000 bushels available for sale in fresh form in domestic markets. In five of the past seven years the comparable quantity has ranged from 66,000,000 to 76,000,000 bushels and has been exceeded only in 1935 with 92,000,000 bushels and in 1937 with 105,000,000.

The quantity of fresh fruit sales including exports which will net the greatest return to growers this season is approximately equal to the volume of fruit which will grade U. S. Commercial or better, each being approximately 80,000,000 bushels.

What can growers do to help prevent a recurrence of the experiences of 1935 and 1937? There are certain steps which they might take individually, and a reasonable degree of protection against low prices can be achieved if the majority of growers co-operate.

The most important of these steps would appear to be the following:

1. Market U. S. No. 1 and Commercial grades in fresh fruit channels.

2. Consider carefully whether it will pay to pack and sell Utility grade and undesirable sizes of varieties which will be difficult to market.

3. Keep cull fruit and Utility grade of undesirable varieties out of fresh market channels and dispose of them in by-product outlets.

4. Place only the better grades, sizes and varieties in cold storage so that the storage volume may not exceed that of last season (31,000,000 bushels) or preferably less, as common storage stocks may be expected to exceed those from the 1938 crop.

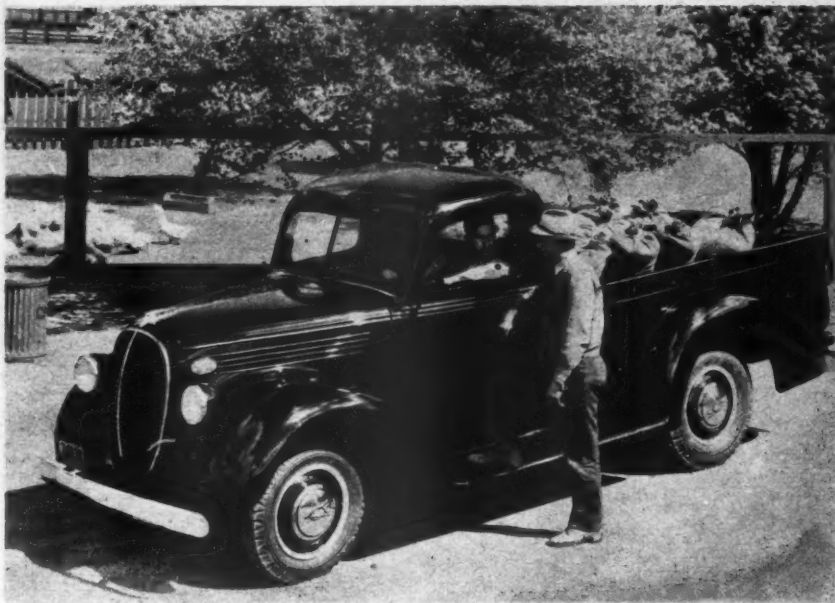
5. Keep good quality fruit of seasonable varieties moving into consumption from the beginning of the season. This is important because of the abundance of fall varieties.

6. Remember that competition with citrus fruit will be as great as last season and that apples can be marketed more readily during the fall months than after the first of the year when citrus supplies may be expected to be more liberal.

7. Do everything possible to promote the sale of good fruit at reasonable prices so that the maximum consumption may be secured. A good

(Continued on page 23)

Here's a mighty good producer TOO!



ILLUSTRATED IS THE FORD V-8 122-INCH ONE-TONNER WITH EXPRESS BODY

THE FORD V-8 Truck is built to do its share of hard work . . . to do more of it in less time . . . to do it for less money.

The Ford Truck is a reliable helper—always ready to go to work for you. It'll put your farm products on the best markets. It'll bring back feed and supplies. It'll do all sorts of odd jobs. It will save you time—increase your profits.

The Ford Motor Company spares no effort to give you real truck quality at the lowest possible price. You get the smooth, steady flow of eight-cylinder power. You get your choice of three V-8 engine sizes—95, 85 and 60 horsepower. You get mechanical features that you find elsewhere only at much higher prices.

In the Ford Truck, you've got the rugged dependability you need . . . the low operating and maintenance costs that make a truck pay.

See your Ford dealer and arrange for an actual "on-the-job" test—with your own loads—over your own routes. Prove Ford economy to your own satisfaction before you spend another truck dollar.

FORD V-8 TRUCKS

Ford Motor Company, builders of Ford V-8 and Mercury Cars, Ford Trucks, Commercial Cars, Station Wagons and Transit Buses

AMERICAN FRUIT GROWER

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**THERE'S
MORE PROFIT
IN APPLES PACKED
IN BEMIS
LENONET BAGS**

Growers everywhere are now discovering that apples packed in Bemis Lenonet Open-Mesh Bags sell faster and bring increased profits. It's an important trend in line with modern "package" merchandising methods.

Here's why Bemis Lenonet Bags increase sales and improve the margin of profit:

1. Apples look more attractive in these colorful bags.
2. Displays are easy to build and maintain.
3. Apples in Lenonet Open-Mesh Bags bring top prices.
4. There is less spoilage and waste because of free air circulation.
5. The consumer-size package cuts selling time to a minimum.
6. Grocers like Lenonet Bags because they move more apples. Women buy 5 or 10 pounds instead of "just a couple of pounds."
7. Housewives like the conveniences of Lenonet Bags. Easy to carry—handy size—useful for other purposes when empty.
8. Housewives can see what they buy, and know the contents have not been "picked over."

For increased profit, pack your apples in Bemis Lenonet Bags. They are quickly and easily filled, and make the best fruit look better. Send coupon below for full information.



**BEMIS BRO.
BAG CO.**

426 Poplar St., St. Louis, Mo.

Bemis Bro. Bag Co.,
426 Poplar St., St. Louis, Mo.
Without obligation, send at once, samples,
prices, and full details of Bemis Open-Mesh
Apple Bags.

Name UNIVERSITY OF IDAHO
Post Office LIBRARY
MOSCOW IDAHO
R.F.D. _____ State _____

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MULCHING STRAWBERRIES

(Continued from page 14)

mulching is the expense, incidentally a disadvantage of practically every other worthwhile farm operation. Since costs of labor and materials vary so much in different localities, no attempt will be made here to discuss actual costs.

There is also something of a fire hazard, although the writer has never seen a strawberry patch damaged by fire. In some districts there might possibly be additional insect or disease injury in mulched fields but that is rarely the case in New Jersey.

The mulch may cause direct injury to the plants and result in lower yields if applied too early, removed too late, or applied too heavily where the winters are mild and rainy.

Dozens of different materials have probably been used with some degree of success. A satisfactory mulching material must be comparatively light, straw-like in texture, not inclined to pack too tightly but still enough so that it will not blow away in the first strong wind, free of obnoxious weed seeds and reasonable in price. A few of the more common materials are listed below.

Salt hay or marsh hay is the material most frequently used in New Jersey. It is easy to apply, does not blow off the field, is free from weed seeds, and is so tough that a considerable quantity may be raked up after the pickers have walked over it throughout the season. In other words it has "good wearing qualities." It may become so compact that it will tend to "smother" the plants if applied too heavily and it must be loosened up and thinned out over the plants in the spring, otherwise they may fail to push through and the crop will be reduced.

Pine needles or "shatters" is a commonly used material in parts of the South. With certain types of pine needles there may be a question about the advisability of turning them under after the crop is picked.

In many regions some kind of straw such as wheat, rye, etc., is the logical material to use. Certain New Jersey growers have made a practice of running straw through a cutter before applying it in order to more easily get a uniform covering, prevent the straw from "rolling up" in front of a strong wind, and to reduce or eliminate the necessity of loosening up the mulch in the spring. The plants seem to be able to grow through a mulch of average thickness of chopped straw. One of the objections to the use of straw is that there may be enough seed in it to cause trouble.

A legume hay, if available at a reasonable price, is quite satisfactory where there is no danger of over-

stimulation of plant growth as, under certain conditions, enough nitrogen will be supplied by the mulch to appreciably affect the color of leaves and amount of leaf growth.

Coarse stable manure is frequently used but it has the disadvantages of matting down very compactly, of supplying nitrogen in amounts rather hard to estimate and sometimes too great, of carrying weed seeds and of not being as effective as straw in keeping the berries clean. Manure is usually beneficial in increasing growth and production of strawberries but the writer would prefer to apply it before the plants are set rather than as a mulch.

Chopped cornstalks, sudan grass and peanut hulls have been used. Leaves are often used in the home garden but may mat down too tightly and tend to smother the plants.

The securing of an adequate supply of any mulching material is always a problem. In many cases it may be more economical to grow the material than to purchase it. One combination tried by the writer was rye, cut when in bloom to prevent seed formation, followed by sudan grass, to be cut and followed again by rye, thus giving two crops per year of good mulching material. Strawberry growers with available land might well try some such scheme as this.

It has been suggested occasionally that the mulch may be grown between the strawberry rows by seeding oats in late summer, in regions where winters are severe enough to insure all the oats being killed. This has some advantages if the soil is adequately supplied with moisture but is not a substitute for mulching. For several years the writer has been seeding oats in strawberry fields about the first of September. The oats grow almost knee high and help prevent erosion in early fall, add some organic matter, and help to prevent the mulching material from blowing away. However, almost as much mulching material is needed where oats are growing as where they are not.

Some growers rely on the weeds and grass which appear between the rows in the spring to prevent the spattering of mud and so keep the berries clean. This is usually unsatisfactory because of the uncertainty as to kind and amount of weeds which may appear and because of the competition for water which may decrease yields unless rainfall is sufficient at all times.

It has been a common practice in some northern sections to mulch after the ground is frozen solidly enough to bear up a truck or farm wagon. Results secured by Roberts in Wisconsin

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EXPORT MARKETS

(Continued from page 11)

probable market rise. Prices are still governed by the law of supply and demand and, since Europe draws its supplies from so many sources, price is determined by the total supply, regardless of source. It is not a question of how many barrels, boxes or baskets may be available from the United States, but of the total stocks from all countries which have to be moved within a reasonable time.

Furthermore, the price of apples is influenced materially by the volume and price of competitive supplies of citrus and other fruits. When British markets are generously supplied with cheap oranges and grapefruit, it is difficult to sell a large volume of deciduous fruits at relatively higher prices. The ability to move a large volume of any kind of fruit is governed by the retail price ticket. European buyers may be sympathetic toward producers and their production problems, but they are not interested in their cost figures. The buyer is interested in the laid-down value of the fruit and his ability to make a profit. Fruit to sell must be not only attractive, but popularly priced and, if the American producer cannot meet those conditions, the trade is forced to turn to other sources of supply where those requirements can be met.

In most instances fruit is sold largely on the basis of appearance. While the United States has led the way in scientific growing and high standards, it cannot be said that they have a monopoly on these essential requirements. Competitive countries have not only adopted equally good methods, but have in many instances surpassed us. We might console ourselves by saying that the industry in those countries is still young and that they, too, will be faced with insect and disease problems which will make high standards more difficult to maintain. That may be quite true, but the point is that we are faced today with that competition regardless of what the future may hold out for them.

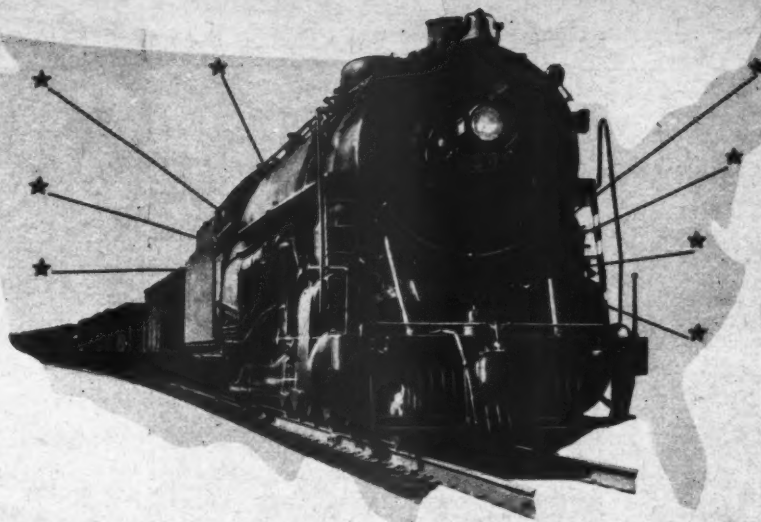
Since nature is the determining factor in the size of crops, it is impossible to regulate production to fit in with constantly changing economic conditions. With our market outlets in Europe being restricted more each year, it means more intensive competition in those markets which are still more or less open.

Europe this year has prospects for a good crop of fruit. This fact, together with the uncertainty of the political outlook, does not present a very encouraging picture. Present reports indicate that Canada will have another big crop this year. The concessions granted under the Anglo-American trade agreement, however, will assist the American industry by reducing the preference advantage of Canadian apples in the United Kingdom.

Twelve months ago prospects for a successful export deal were extremely favorable. The events which followed to upset this calculation are well known to all of you. Despite the uncertainties, our apple exports last season amounted to around 12,000,000 bushels, which, considering the situation, was a remarkable achievement.

The importance of shipping quality fruit abroad has been recognized for several years but at no time has it seemed as essential as right now. During the coming season growers and shippers should make every effort to pack and ship the highest quality fruit within their power to produce. The day of using the overseas market as a dumping ground for inferior fruit is passed and in my opinion will never return. Because of the high charges involved in the marketing of our

(Continued on page 19)



Here's what gives value to your crops!

YOU haul your crops to town and sell them—and so far as you are concerned the transaction is ended.

But it is ended only because those crops, and the products made from them, can reach their final markets, usually at far-distant points.

And that's where the railroads come in, with their real super-highways of today and tomorrow, built and maintained by private enterprise, stretching into every part of each of the 48 states.

Do you know that the railroads are called upon to haul more than eight times the tonnage moved by any other sort of common carrier? Do you know that on their super-highways a single freight car can carry 50 tons—a single freight train, 5,000 tons or more? And that the charge for all sorts of freight averages only about one cent for hauling a ton one mile?

That's the sort of hauling which it takes to move America's crops to mar-

ket. No other form of transportation can do the job the railroads do.

The fact is, the American railroads provide the most modern transportation in the world—mass transportation by means of a single power unit pulling a long train of cars over a steel highway used for no other purpose but mass transportation. Without this mass transportation by the railroads a large part of the crops produced in the country would never leave the farm.

While railroads have been doing our hauling since oxcart days, they have kept pace with the times by constantly improving and modernizing their tracks and equipment. The billions of dollars invested in improved facilities have been railroad dollars—not tax dollars. For railroads build their own tracks, maintain them, and pay taxes on them.

When you look at the record of the railroads and the job they are doing, you can see why government should give all carriers equal treatment and an equal opportunity to earn a living.

A FAIR FIELD.
NO GOVERNMENT FAVOR—
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ASSOCIATION OF
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Fall Fertilization of Fruit Trees Recommended

EXPERIMENT STATION HORTICULTURISTS
recommend fall fertilization for fruit trees.

It conditions the trees.

**It gets the nitrogen down deep for
the roots to feed on when spring
growth starts.**

**It gets the job out of the way of other
spring work.**

Because GRANULAR 'AERO' CYANAMID is
very resistant to leaching, you can apply it in
the fall without danger of loss of nitrogen. It
stays in the soil until needed by the trees.

Write for our leaflet "For a Better Fruit
Crop Fertilize with 'Aero' Cyanamid."



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MY MONEY BACK GUARANTEE
gives you 3 months to see how they fit and look. I have
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PAGE 18

KILL RATS WITHOUT POISON

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MONEY
BACK
IF RATS
DON'T
DIE**



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won't kill
Livestock,
Pets or Poul-
try; Gets Rats
Every Time.
K-R-O is made
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raticide recommended
by U.S. Dept. Agr. (Bul.
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homes, 35¢ and \$1.00; Pow-
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Damage each rat does
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year. K-R-O Co.,
Springfield, O.

**K-R-O KILLS RATS
ONLY**

AMERICAN FRUIT GROWER

STRAWBERRY MULCHES

(Continued from page 16)

have shown the importance of getting the mulch on early so as to protect the plants from the first severe freeze which may cause considerable injury to the roots, especially when the temperature drops suddenly instead of gradually over a period of several days. Since this work was reported there has been a tendency on the part of some to favor early application of mulch rather generally. In the milder climates, such as in New Jersey, however, there is some danger in such early applications, when the application is fairly heavy, as the weather may be comparatively warm and rainy until the middle or latter part of December. In such climates the writer would prefer to apply the mulch after the ground is frozen hard and risk the chance of damage by a sudden early drop in temperature rather than to risk having the plants covered during warm, humid weather when they are still making some growth.

Spring application of mulching material is frequently practiced in those areas where there is little likelihood of winter injury. A common danger in this practice is that the application may be delayed until the soil has dried out enough so that full value is not received from the moisture-conserving power of the mulch. A spring application will be effective in keeping the berries clean without using quite so much per acre as would be needed in the fall, but in most sections the advantages of fall application outweigh the saving in material.

Unless the applications have been very light, or unless chopped material was used, it will be necessary in the spring to move part of the material from the plants into the alleys. In the latitude of New Jersey this is usually done about the time the plants start to make some leaf growth and begin to turn slightly yellow due to lack of light under the mulch. If the mulch is removed at this time in New Jersey, ripening will be delayed two or three days, whereas removal when unmulched plants start to bloom will result in a delay of about one week, as compared to unmulched plants, but there will usually be some reduction in yields after such late removal.

(Continued in October issue)

FRUIT TREES

In the newer and better varieties offered by Virginia's Largest Growers. Write for Free Copy 44-page Planting Guide and New Fall Price List.

WAYNESBORO NURSERIES
Waynesboro, Virginia

BLUEBERRIES A PROFITABLE ORNAMENTAL

Be the first to raise CULTIVATED BLUEBERRIES. The coming sensation. Very ornamental. Exquisite white blossoms; leaves change from green to red; grows 6 ft. tall. Eat delicious jumbo sized berries with cream. Two to four bushes will supply average family with fresh-tasting blueberry pies all season. Fully described in our fall catalog. Also real bargains in fall bulbs, Phlox, Roses, Shrubs, Evergreens. Fruit plants of all kinds. Write now. The Ackerman Nursery, Box 12, Bridgman, Mich.

SEPTEMBER, 1938

EXPORT MARKETS

(Continued from page 17)

fruit abroad, only the better grades stand a chance of netting the grower a profit.

If growers and shippers in this country are unable to supply the present day market requirements of the overseas market, other countries are rapidly becoming able to do this. The Australasian pack during recent years has shown a notable improvement, but perhaps the outstanding development in the past three seasons has been the Nova Scotian pack. The customary 10 shilling per barrel spread between a barrel from the Appalachian belt and the Annapolis Valley has disappeared. Today, apples from the latter district are commanding a price on a parity with those from the heretofore preferred Shenandoah-Cumberland district.

During recent years there has been an increasing trend away from baskets to a box or box-crate in the eastern states. If the box is intended to replace the basket as an export package, an effort should be made to standardize the package. The collection of assorted sizes, shapes and volume is only leading to confusion. The overpacking of western boxes has failed in its purpose and shippers from the Northwest will do well to put up a full weight pack but avoid trying to crowd a bushel and a fifth or a bushel and a third in a box constructed for and intended to hold a bushel.

A package should be constructed which will permit the fruit to arrive on the market in good condition, but it is the inherent quality of the contents which sets the price. Fruit of questionable quality packed in boxes stands no more chance of getting good prices than the same fruit packed in barrels.

Many growers have been prone to criticize our federal-state grades, saying they are too high. As a matter of fact, based upon our market requirements, they are much too low. Our export market was never developed on the minimum requirements which the grade would permit. Those growers and shippers who have profited by shipping their fruit abroad have done so by meeting the requirements of the market rather than the grade. The quickest way for a fruit grower to go out of business today is to follow a policy which he thinks will permit him "to get by."

With a good crop of apples at hand and a good prospect in Europe, together with the unsettled world political outlook, the industry, as I have mentioned earlier, should exert every effort to grow, pack and ship only the very highest quality this coming season.



Water Insoluble

COPPER FUNGICIDES

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Tennessee Corporation's extensive research has developed an improved series of copper fungicides with these advantages:

- Varying strengths (26% to 53% copper) for specific treatment of various fungus diseases.
- Incorporation of new materials for greater safety and more effective control.
- Greater covering power and adherence, with lighter visible spray residue and less injury to plant.
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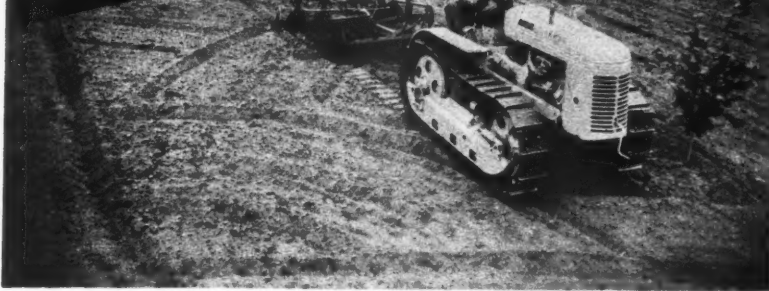
Consult your spray material dealer or write direct to:

TENNESSEE CORPORATION
Box 2205 Atlanta, Ga.

SEPTEMBER, 1939

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No other tractor gives you all the advantages you'll get with a Cletrac, because Model H was designed from the ground up to meet the needs of orchardists.

Try one in your own orchard or vineyard. Put it through its paces under your most difficult conditions. Then you can invest your tractor dollars most wisely.

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MAIL THIS COUPON

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Write name and address here and mail for complete information. 1 farm _____ acres.

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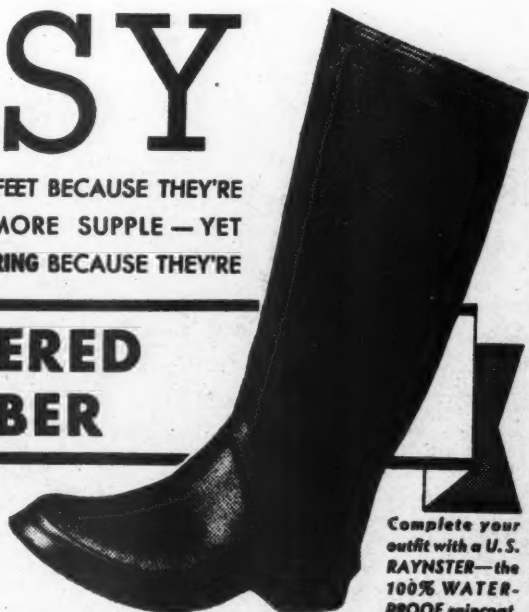


ON YOUR FEET BECAUSE THEY'RE LIGHTER, MORE SUPPLE — YET LONGER WEARING BECAUSE THEY'RE

TEMPERED RUBBER

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U. S. ROYALS

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2. U. S. Shockproof Insole
3. Distinctive Pigskin Finish
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Complete your outfit with a U. S. RAYNSTER—the 100% WATER-PROOF raincoat.

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AMERICAN FRUIT GROWER

PAGE 19

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Why continue to suffer without attempting to do something? Write today for New Booklet—"THE LIEPE METHODS FOR HOME USE." It tells about Varicose Ulcers and Open Leg Sores. Liepe Methods used while you walk. More than 40 years of success. Praised and endorsed by multitudes.

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PAGE 28

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Only 15c a Word—CASH WITH ORDER. Count each initial and whole number as one word.
ADDRESS: AMERICAN FRUIT GROWER, 1370 Ontario Street, Cleveland, Ohio

BABY CHICKS

DAVIS CHICKS FOR FALL BROILERS. NOW Hatching. Write for prices and delivery dates. DAVIS POULTRY FARM, Route 3, Ramsey, Indiana.

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CIDER PRESSER, GRATERS, FILTERS, PUMPS, supplies. Booklet F "How to Keep Cider Sweet and Make Vinegar Quickly" Free. PALMER BROS., Coe Cob, Connecticut.

WE BUILD CIDER MILLS, FRUIT PRESSES AND Berry Crushers. Ask for bulletin. HERTZLER & ZOOK COMPANY, Box F-4, Belleville, Pennsylvania.

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CIDER MILL SUPPLIES MUST REFLECT A KNOWLEDGE of your needs. Mount Gilead Cider Mill Supplies have been the choice of orchardists for half a century. Write for the new Catalog #391-P and price list. THE HYDRAULIC PRESS MFG. COMPANY, 403 Lincoln Ave., Mount Gilead, Ohio.

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GRAVITY ROLLER CONVEYORS MADE TO ORDER. Alloy steel throughout. Ball bearing rollers. Our bushel special \$18.85 for 10 feet. LOVE TRACTOR INC., Benton Harbor, Michigan.

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FANCY DAIRY HEIFERS \$10.00. SHAWNEE DAIRY CATTLE COMPANY, Lancaster, Pennsylvania.

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BATTERY-POWERED FARM RADIO—\$8.95 (complete). Sensation. Trial offer. Catalog FREE. MISSION, B-1022. Columbus, Kansas.

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235 ACRE ORCHARD, 1000 YOUNG BEARING FRUIT trees, balance farm and meadowland. Proposition merits investigation. On highway. F. D. McCALL, Ringold, Oklahoma.

ONE 300-TON MOUNT GILEAD CIDER PRESS, 14" Ram, Triple Action Pump, 13" Paper Hammermill Pulper. C. E. OPPERMAN, Birmingham, Ohio.

1/4 MILLION GLADIOLA BULBS AND ALL EQUIPMENT for growing must be sold. WEST COAST BULB COMPANY, Box 329, Clearwater, Florida.

36-INCH HYDRAULIC CIDER PRESS. WILL TRADE for smaller press. BOX 55, Pearl, Illinois.

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FOR SALE: 10,000 WOOD BEER BOXES. FOR field, storage purposes, almost new, capacity approximately one bushel, iron band reinforcement. 9 1/2c each. ZIFF BROTHERS, 209 S. State, Chicago, Illinois.

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CLARIFY AND PRESERVE THOSE FRUIT JUICES with the effective MOUNT GILEAD PECTINOL COLD PACK PROCESS. It is simple and speedy—and is the most practical way to stop up profits. For complete information about PECTINOL A, write THE HYDRAULIC PRESS MFG. COMPANY, 403 Lincoln Avenue, Mount Gilead, Ohio.

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THE MOUNT GILEAD CLEAR-FLO FILTER FAR surpasses any other filter on the market for effectiveness—rapid filtering—ease of cleaning—economy. It assures complete clarification of cider and other fruit juices. It will pay you to look into this new filter. Write THE HYDRAULIC PRESS MFG. COMPANY, 401 Lincoln Avenue, Mount Gilead, Ohio.

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DON'T SPRAY YOUR EYES—GET CESCO SPRAYER'S Goggles. \$1.00 postpaid. Save Your Lungs—get No. 80 Respirator. \$2.00 postpaid. Light, comfortable, durable. CESCO, 2300 Warren, Chicago, Illinois.

LADDERS

SAFETY STEPLADDER. GETS YOU WHERE YOU need to be, inside tree or out, level or rough ground. Special construction eliminates danger of falling. Light, practically unbreakable. Enthusiastically approved by many large orchardists. Write for particulars. BENTON LADDER COMPANY, Route 6, Jackson, Michigan.

LIVESTOCK

HEREFORD STOCKERS AND FEEDERS, SEVERAL large bunches, calves, yearlings, two, cows, steers, or hoppers, your choice. Tested. Better gains obtained feeding choice quality. V. BALDWIN, 106 Altavista, Ottumwa, Iowa.

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STEADY WORK—GOOD PAY. RELIABLE MAN wanted to call on farmers. No experience or capital required. Pleasant work. Home every night. Make up to \$12.00 a day. Wonderful new proposition. Particulars free. Write McNESS CO., Dept. 279, Freeport, Illinois.

MISCELLANEOUS

EVENTUALLY YOU'LL LIVE IN FLORIDA. KEEP in touch with its agricultural opportunities by subscribing to its leading citrus and truck magazine. 50c per year; 3 years, \$1.00. FLORIDA FARM AND GROVE, Jacksonville, Florida.

AMERICAN FRUIT GROWER

NURSERY STOCK

FRUIT TREES: "ERLY-RED-FRE" (PLANT Patent 320), our introduction, unchallenged as America's earliest freestone commercial peach: "COLORA," the hardest commercial peach; Fisher, Golden Jubilee, Fritz Beauty, Vedette, Hale Haven, Valiant, all in Bountiful Ridge selected strains, offer the greatest succession of peaches available. "WIKIPARENT" (patent applied for) apple; Bountiful strain "Improved Wineap," Bountiful, Blaxtman, Red Warrior, and other improved fruit trees. We are recognized leaders in fruit trees and berry plant production and offer today America's greatest values in hardy—thrifty—dependable stock. Send for our latest full catalog. BOUNTIFUL RIDGE NURSERIES, Dept. F-40, Princess Anne, Maryland.

25,000 NEW, HARDY VARIETIES PEACH AND APPLE trees. Catalog Free. MARKHAM, Fruit Dealer, XENIA, Illinois.

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CERTIFIED VELOX PRINTS, GUARANTEED NEVER fade. Daily Service. Roll developed, two prints each negative, 25c. Enlargement coupon. EDWARD'S, Box 3900-G, Cleveland, Ohio.

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FOR SALE: FOR HANDLING THE MOST TENDER fruit safely and quickly, write us for information regarding our Peach and Apple Picking Bags. TOWNSEND COMPANY, Lake Wales, Florida.

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NEW ENGLAND POULTRYMAN AND NORTHEASTERN Breeder SPECIAL OFFER during the Summer season. One Year for 50 cents. Interesting news and views. Valuable editorial material on skillful breeding, profitable production, and efficient marketing. Carefully chosen advertising. Nationally read by poultry leaders. Subscribe now! NEW ENGLAND POULTRYMAN, 4 Park Street, Boston, Massachusetts.

SALESMEN WANTED

SALESMEN WANTED. FRUIT TREES FOR commercial orchardists. Write for prices. SOUTHERN NURSERY COMPANY, Winchester, Tennessee.

SERVICE BARRELS

EIGHT HOOP, 50-GALLON WHISKY BARRELS: FOR for wine, cider, vinegar, pickles, buttermilk, etc. \$1.50 6—\$5.00. 20 up 75c each. Ask for carload prices. Cash with order. SHO-OFF ORCHARDS PRODUCTS COMPANY, 107 N. Washington, Peoria, Illinois.

STRAWBERRY PLANTS

WILL HAVE MILLIONS YELLOW FREE BLAKEMORE Strawberry Plants for setting Spring of 1940. Write for prices. B. R. McUMBER, Greenfield, Tennessee.

MILLIONS VERY BEST MISSIONARY, KLONDIKE, Blakemore, Aroma, Dorsett. \$1.75 per 1000. JOHN LIGHTFOOT, Birchwood, Tennessee.

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Write for a Beauty School Bulletin

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Catalog
Col. J. M. Sellers, Superintendent

SEPTEMBER, 1939

NEW

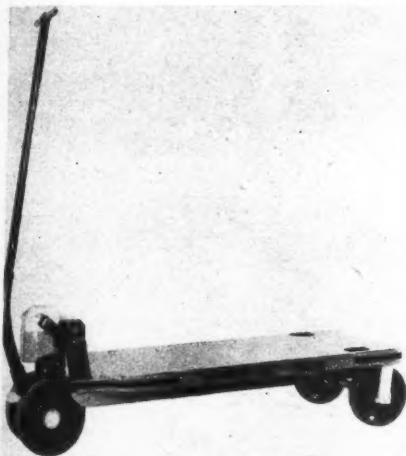
By HANDY ANDY

One job that's always been a "back breaker" is pulling dandelions from lawns. But a new tool has just been marketed that seems to have all the gadgets needed to lessen the toil of dandelion removal. When the operator, in a standing position, thrusts the cutting edge of the dandelion extractor against the plant, the cut-off portion of the plant is picked up by the inbuilt rake and can then be dropped into a basket. So instead of reaching for the liniment, it appears that we now reach for another gadget.

LIFT TRUCK •

A new lift truck which will raise capacity loads with a single stroke and requires less than 70 pounds pressure on the handle has just been announced. Besides easy operation, the handle of this new truck can be used on either side within an arc of 180 degrees.

The truck is mechanical in lifting, hy-



draulic in lowering. For greatest leverage, the handle is pivoted from the center of the front axle. To prevent blistering, the grip turns with the hands. Wide-spaced, 10-inch wheels in front permit heavy loading and easy steering. The platform is covered with a steel plate that allows for transportation of other than usual lift truck loads. All wheels are equipped with roller bearings and links carry oilless bearings. The trucks are available in four capacities ranging from a ton to 5000 pounds.

To those growers who are constantly battling against rats in packing house, storage or fruit farm home, the advice of C. G. Oederkirk of the U.S.D.A. Bureau of Biological Survey, stationed at Purdue University, will be of value. He reports on a 16-year study showing that rat infestation is higher when weather and other conditions are optimum for plant growth. The past 16 to 18 months have been good for rat and mice reproduction.

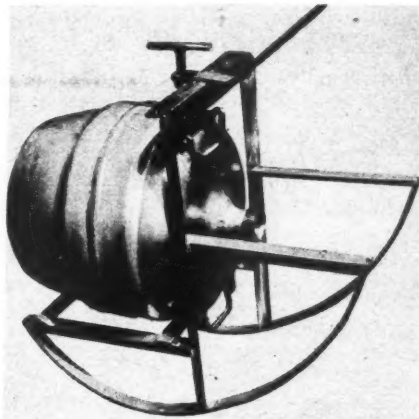
Oederkirk says that powdered red squill is

- LIFT TRUCK
- CARBOY POURER
- PEAR PICKER

best for killing rats on farms. This material is deadly to rats, but comparatively harmless to humans and animals. Squill should be exposed with canned salmon, hamburger or a mixture of moistened rolled oats with corn meal, at rate of one part of squill to 16 parts of bait if a high quality squill is used. An assortment of these baits should be put out in teaspoonful quantities so rats can take their choice of those which are most appealing.

CARBOY POURER •

Proper handling of any acids or other caustic chemicals around the fruit farm packing shed or chemical storage room is always a problem. Unless properly used, carboys can be easily tipped and injury may



result from spilled chemicals. A new carboy pourer looks like it will prevent such accidents. This pourer was developed especially for use with the new all-aluminum carboys that have become popular lately.

Operation of the pourer is simple. With the carboy resting on its base, the pourer is placed over the top and clamped securely by means of a threaded handle just below the shoulder. Then an easy pull on the handle brings the carboy over into pouring position, resting on a broad rocker base.

We hear a lot these days about humus for orchard soils and how it's necessary to maintain a goodly amount of organic matter if the soil is to hold moisture and if there is the correct amount of air for the roots. THE HUMUS PROBLEM SOLVED is a new booklet that gives a clear-cut, easy-to-understand discussion of the humus situation.

PEAR PICKER •



I've had a good many requests in the last couple of years for information on fruit pickers. Here's a new one that has round, smooth hooks at the top which engage the pear stem. Then, by a twist of the pole, the fruit is pulled from the branch and drops into receptacle. Cup-like base holds several pears.

AMERICAN FRUIT GROWER

UGH! HIM NO DUST STORM - HIM NEED SANI-FLUSH - CLEAN-UM OUT RADIATOR!



You see radiators boiling everywhere you go. Don't let this happen to you. Keep rust and scale flushed out of your cooling system. Do it yourself with Sani-Flush. It costs only 10c (25c for the largest trucks and tractors). Do it regularly—at least twice a year.

Just pour Sani-Flush in the radiator (directions on the can). Drain. Flush. Refill with clean water. That's all there is to it! Water circulates freely. Your truck runs cooler. More power. Better mileage. And no unnecessary repair bills. Maybe you'd rather ask your garage or service station to do the job for you. Insist on Sani-Flush. It cannot injure motor or fittings. You'll find Sani-Flush in most bath-rooms for cleaning toilets. Sold by grocery, drug, hardware, and five-and-ten-cent stores. 25c and 10c sizes. The Hygienic Products Company, Canton, Ohio.

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Try Our Unbreakable Roofless & Partial Plates

Enjoy BEAUTIFUL Natural-Looking FALSE TEETH
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WE make-BY MAIL-the World's No. 1 FIT-RITE Dental Plates for men and women—from impressions taken in TRIAL your home. Thousands of pleased patrons. MONEY-BACK GUARANTEE YOU'LL BE SATISFIED. Monthly payments possible. FREE mouth-forms, easy directions and catalog. WRITE ME TODAY! C. T. Johnson, President of UNITED STATES DENTAL COMPANY Dept. C-5, 1555 Milwaukee Ave. Chicago, Ill.

LADDERS for PICKING

This year and every year you can be sure of safe picking on BAUER Ladders. Special designs for fruit pickers have Countersunk Rungs and Double-Dipped Tenons, making them stronger and longer lasting. Write now for direct prices. BAUER MFG. CO. — Wooster, Ohio

BUTLER 'CHAMPION'

a Marvelous Fruit Grader
An amazing machine for the careful, accurate grading of round fruits and vegetables. All-metal construction. Wt. 200 lbs. Ready for work when unpacked—electric, gasoline or hand power. \$135.00 up. Agents wanted. Send for Circulars. BUTLER MFG. & MCHY. CO. Bell Bldg., Chicago, Ill.

SUCCESSFUL ORCHARDS

● A "ROUND TABLE" PAGE FOR EVERY GROWER ●

NEW CONTROL PROVES EFFECTIVE FOR BORERS

PEACH trees on the Pennsylvania fruit farm of H. E. Stover must have been in bad condition when they prompted him to write:

"I wouldn't have given five dollars for 87 peach trees less than a year ago. Now, though, they look fine."

Just how these trees were changed from a near liability to a strong asset is contained in another portion of Mr. Stover's letter which reads:

"Following the appearance of the article on peach tree borer control with ethylene dichloride emulsion in the February issue of **AMERICAN FRUIT GROWER**, I wrote a number of manufacturers for the material. One firm was kind enough to send me a gallon of the emulsion for experimental use, together with directions for dilution.

"I had a block of 87 peach trees in bad shape from borer. I expected to lose most of them. There were masses of gum about the collars and most every other indication of 'sick' trees. Diluting the material one to seven with water, I applied it with a compressed air sprayer, putting enough on each tree to thoroughly wet the base and dampen the ground about the tree. Next we drew some soil about the tree, just enough to cover the wet spot.

"In mid-August, 80 of the trees are alive and vigorous, seven are dead. Most of the trees are fruiting vigorously. Three of the 80 trees look a little wilted, but the results amazed me.

"My experience makes me feel a gallon of the emulsion would be enough for close to a hundred three-year-old peach trees. The emulsion is easy to apply and not objectionable to use. I don't think I'll ever use anything else for peach borer as long as I can obtain ethylene dichloride emulsion."

Mr. Stover adds that he applied the emulsion about the middle of May. Usual time for control is early fall.

\$1.00

EACH FOR YOUR NEW IDEAS

Here, each month, growers get together to discuss experiences and ideas. The beginner as well as the veteran discovers many practical suggestions for better and more profitable fruit growing. You, too, have some experiences that will be helpful to fellow growers. Send them—briefly written on a penny card is satisfactory—to "ROUND TABLE EDITOR," **AMERICAN FRUIT GROWER**, 1370 Ontario St., Cleveland, Ohio. One dollar will be paid for each item published on this page.

E. M. Halbleib, whose seasonal orchard operations are discussed at right, is shown, left below, with his family. In other illustration, pickers are loading harvested fruit on wagon which is pulled by a late-type Diesel tractor, used for a variety of orchard tasks on the Halbleib central Illinois farm.

SAYS VETCH IS WORTH \$1000 A YEAR IN ORCHARD

MISSOURIAN E. R. Gorton reports: "Hairy vetch is worth \$1,000 a year in a 112-acre orchard under our management. One of the big problems facing fruit growers is to supply the soil with plenty of humus and nitrogen. Hairy vetch solves that problem for us better than anything we have used. In four years, it has increased production 25 per cent. Vetch is a legume and, if properly inoculated, will fix nitrogen in the soil. There is enough top growth to provide a good supply of organic matter. These two requirements can be met with clover, but the growing season for any of the clovers is the same as that for fruit trees. Vetch grows in early spring before fruit trees need soil moisture and minerals.

"We permit the vetch to seed, then disk it into the soil. For this we use a heavy tractor disk with 22-inch cut-out disks spaced nine inches apart, affording deeper penetration and better cutting of heavy growth than is possible with conventional disks. The seed germinates in the fall and the plant makes its growth when trees are dormant."

CHALKS UP FIFTEEN TRIPS OVER ORCHARD FOR SEASON

CAREFUL routine orchard operations are followed by Ernest M. Halbleib, central Illinois fruit grower, who maintains, "Apple trees don't just grow and produce, it takes work.

"Last year we disked our orchard five times, sprayed six times, applied commercial fertilizer in the spring and manured in the fall. This work, along with picking and hauling, made a total of 15 trips over the orchard for the season. Our 35-acre apple orchard is made up of Grimes Golden, Golden Delicious, King David and Jonathan varieties. Our crop runs around 6,000 bushels a year and most of the fruit is sold right at the farm."



APPLE AND PEAR SALES

(Continued from page 15)

start in this direction has been made through the plans for co-operation with retailers.

It seems clear that the success or failure of apple marketing during this season will depend primarily upon the decisions which growers make when they decide the quality of fruit which they will pack and store and the prices which they are willing to accept in moving fruit into consumption channels. These decisions must be sound from the standpoint of growers as a whole as well as individuals if the best return is to be secured for the 1939 apple crop.

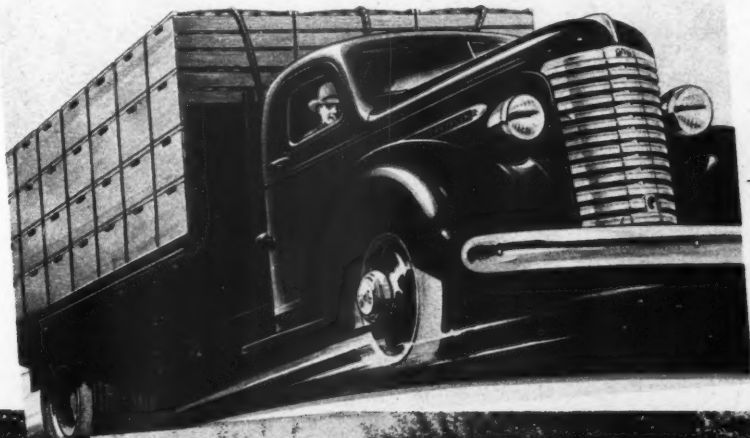
Prospects for pears are quite different. July estimates indicate a total crop of over 30,000,000 bushels as compared with the record production of over 32,000,000 in 1938, 29,500,000 in 1937 and an average of 25,500,000 from 1928 to 1937.

In the three Pacific Coast states, where two-thirds of the total United States production of all pears originate, the crop this year is the second largest on record, the largest being that of the past season. In the rest of the country, pear production this year is expected to be above that of the past season, but only slightly greater than the average for the past five years. Increased production of pears on the Pacific Coast consists largely of late varieties which are estimated to be about 30 per cent greater in volume than the production during the past five years. Bartlett pear production shows an increase of only three per cent over the five-year average.

It would appear that from experience both the Bartlett and the winter pear industries have reached the definite conclusion that the sale of undesirable grades and sizes must be prevented if returns to growers are to be maintained at levels comparable with the cost of growing the crop.

The rapidly increasing production of pears, particularly on the Pacific Coast, presents entirely different marketing problems than are presented by apples. In pears we are not concerned with merely holding our present position but with the necessity of enlarging existing outlets and developing new markets to absorb increased production at a fair return to growers. A major step in the direction of marketing a larger volume of production was the elimination of unprofitable grades and sizes. Other efforts are now being made by the industry to develop markets which a few years ago did not take any or negligible quantities of pears. The results so far are very encouraging and it is expected that the larger volume of production will be marketed without a reduction in the returns to growers such as ordinarily accompanies a rapid rise in production.

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